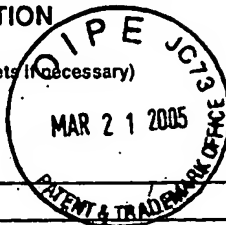


(Use several sheets if necessary)



**Serial No.**

**10/609,410**

**Applicant**

**NAKAMURA et al.**

Filing Date

**TC/A.U.**

**July 1, 2003**

2825

## U.S. PATENT DOCUMENTS

[illegible]

## FOREIGN PATENT DOCUMENTS

[illegible]

**OTHER DOCUMENTS (including Author, Title, Date, Pertinent pages, etc.)**

vy	AKASAKI et al., "MOVPE Growth of GaN and $\text{Al}_x\text{Ga}_{1-x}\text{N}$ and Their Luminescence and Electrical Properties," Memoirs of the Faculty of Engineering, Nagoya Univ., Vol. 43, No. 2 (1991)
vy	Williams Modern GaAs Processing Method (1990), p. 219
vy	Database WPI, Week 9444, Derwent Publications Ltd., London, Nichia Kagaku Kogyo KK (see Abstract)
vy	JP 6275868 (09/30/1994) (see Abstract)
vy	Written Opposition dated January 15, 2001, p. 1-3
vy	Written Opposition dated January 19, 2001, pp. 1-5

**\*Examiner**

N-Yasmeen

**Date Considered**

08/10/05

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.

07/01/03

10/609,410

INFORMATION DISCLOSURE  
CITATION

ATTY. DOCKET NO.

DIVISIONAL OF SERIAL NO.

160-386

10/292,583

APPLICANT

NAKAMURA et al

(Use several sheets if necessary)

FILING DATE

GROUP

July 1, 2003

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
VY	5,369,289	11/1994	Tamaki			
VY	5,247,533	9/1993	Okazaki et al			
VY	4,495,514	1/1985	Lawrence et al			
VY	5,281,830	1/1994	Kotaki et al			
VY	4,153,905	5/1979	Charmakadze et al			
VY	5,285,078	2/1994	Mimura et al			

## FOREIGN PATENT DOCUMENTS

	DOCUMENT	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
VY	03-218625	9/1991	Japan			abs
VY	05-013812	1/1993	Japan			abs
	51-85384	7/1976	Japan			abs
	56-81986	7/1981	Japan			abs
	61-144659	9/1986	Japan			abs
	63-61161	4/1988	Japan			abs
	61-87381	5/1986	Japan			abs
	02-229475	9/1990	Japan			abs
	59228776	12/1984	Japan			abs
	55009442 A	1/1980	Japan			abs
	1990-0701577	7/1990	Korea			abs
	5-211347	8/1993	Japan			
	3-183173	8/1991	Japan			
	4-68579	3/1992	Japan			
	5-129658	5/1993	Japan			
	57-111076	7/1982	Japan			
	5-13816	1/1993	Japan			
	62-2675	1/1987	Japan			
	62-287675	12/1987	Japan			
	83103775	4/1994	Taiwan			
	7-45867	2/1995	Japan			
	5-291621	11/1993	Japan			
	5-129658	5/93	Japan			
	0 483 688 A3	5/92	Europe			
	0 483 688 A2	5/92	Europe			
	228776	12/84	Japan			
VY	57-45272	3/82	Japan			

\*Examiner

Date Considered

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.

Form PTO-FB-A820 (Also PTO-1449)

BEST AVAILABLE COPY

752625

INFORMATION DISCLOSURE CITATION		ATTY. DOCKET NO.	DIVISIONAL OF SERIAL NO.
		160-386	10/292,583
		APPLICANT	
		NAKAMURA et al	
		FILING DATE	GROUP
		July 1, 2003	

(Use several sheets if necessary)

FOREIGN PATENT DOCUMENTS (cont)			
✓	6-38265	5/94	Japan
✓	59-228776	12/84	Japan
✓	62-101090	5/87	Japan
✓	10-0225612	7/99	Korea
✓	2-68968	3/90	Japan
✓	5-13816	1/93	Japan

OTHER DOCUMENTS (including Author, Title, Date, Pertinent pages, etc.)	
✓	Oyo Buturi Vol. 60, No. 2, 1991 02; p. 164
✓	Hayes et al Proceedings of Symposium B 1990 Extended Abstracts EA-21 Electronic Optical and Device Properties of Layered Structures
✓	Amano et al Japanese Journal of Applied Physics Vol. 28 No. 12, 1989 L2112-L2114 P-Type Conduction in Mg-Doped GaN Treated with Low-Energy Electron Beam Irradiation (LEEBI)
✓	Nakamura et al Jpn J. Appl. Phys. Vol. 31 (1992) pp 1258-1266 Hole Compensation Mechanisms of P-Type GaN Films Dept. Of Electrical Engineering
✓	Su et al Jpn. J. Applied Physics Vol. 30 No. 5, May 1991 914-916 Ohmic Contacts AuGeNi etc.
✓	Amano et al Inst. Phys. Conf. Ser. No. 106: Chapter 10 pp 725-730 UV and blue electroluminescence etc.
✓	Memoirs of the Faculty of Engineering, Nagoya University, Vol. 43, No. 2, 1991 Mowpe Growth of GaN etc.
✓	Williams Modern GaAs Processing Method, 1990 p. 219
✓	Lin et al Appl. Phys. Lett 64(8), Feb. 1994 pp 1003-1005 Low Resistance ohmic contacts on wide band-gap GaN
✓	Khan et al Appl. Phys. Lett 61 (15) 4/1993 pp. 1786-1787 Metal semiconductor field effect transistor based on single crystal GaN
✓	Japanese KOKAI publication list of patents containing key words "Ni" and "electrode"
✓	Goldenberg et al "Ultraviolet and violet light-emitting..." Appl. Phys. Letts. 62 (1993), 25 Jan. No. 4, pp 381-383
✓	Foresi et al "Metal contacts to gallium nitride" Appl. Phys. Letts 62 (1993) 31 May No. 22, pp. 2859-2861
✓	Akasaki et al "High efficiency UV..." Proc. of the SPIE, Phys. Concepts of Materials...28 Oct. 1990, Aachen, DE, pp 138-149
✓	Khan et al "Metal semiconductor field effect..." Appl. Phys. Letts 62 (15), 12 april 1993, pp. 1786-1787
✓	Nakamura et al "High-power InGaN/GaN..." Appl. Phys. Letts. 62 (19) 10 May 1993 pp 2390-2392
✓	H. Morkoc et al "Large-band-gap SiC..." J. Phys. 76(3), 1 Aug. 1994 pp 1363-1398
✓	Patent Abstracts of Japan, vol 18 no 80 (E-1505) 9 Feb 1994 & JP-A-05 291 621 (Nichia Chem Inc Ltd.) 5 Nov. 1993 (see abstract).
✓	Database WPI, Week 9444, Derwent Publications Ltd. London, GB AN 94-352820 & JP A-6 275 868 (Nichia Kagaku Kogyo KK) 20 Sept. 1994, see abstract
✓	Database WPI, Week 9438, Derwent Publications Ltd. London GV An 94-308360 & JP A 6 237 012 (Nichia Kagaku Kogyo KK) 23 Au. 1994, see abstract

*Examiner	V. Yeastman	Date Considered	04/26/05
-----------	-------------	-----------------	----------

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.

Form PTO-FB-A820 (Also PTO-1449)

BEST AVAILABLE COPY